

PowerGATE™ Power Input Panel

User Manual for 1200 and
1600 Amp Models

LEX
We Deliver the Power™

**A safe, reliable and
convenient means of
connecting temporary
power for disaster
relief applications**



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Important:

This manual contains information critical to the proper installation and operation of the Lex Products PowerGATE™ Power Input Panel. Be certain to read and understand all instructions prior to installation and operation.

NOTE: Must be installed in conjunction with transfer switch (Transfer Switch to be provided by a source other than Lex Products).

Prior to Installation: Site Preparation

Prepare installation site according to local codes.

The PowerGATE Power Input Panel is to be set on an exterior pad and secured to a building or secured to a pad using 3/8" fasteners (See Figure 1).

The surface where the PowerGATE Power Input Panel is to be secured must be capable of supporting the weight of the cabinet as well as the cable attached to it.

The following should be taken into consideration when locating the PowerGATE power Input Panel:

- The PowerGATE Power Input Panel is designed for exterior operation ONLY
- Identify and meet local codes and local Authority Having Jurisdiction (AHJ)
- To prevent carbon monoxide poisoning from improperly ventilated generator emissions, the Power Input Panel must be mounted outdoors only. The mounting location is to be carefully selected to allow convenient connection to a generator, and located a suitable distance away from any building openings or HVAC inlets.

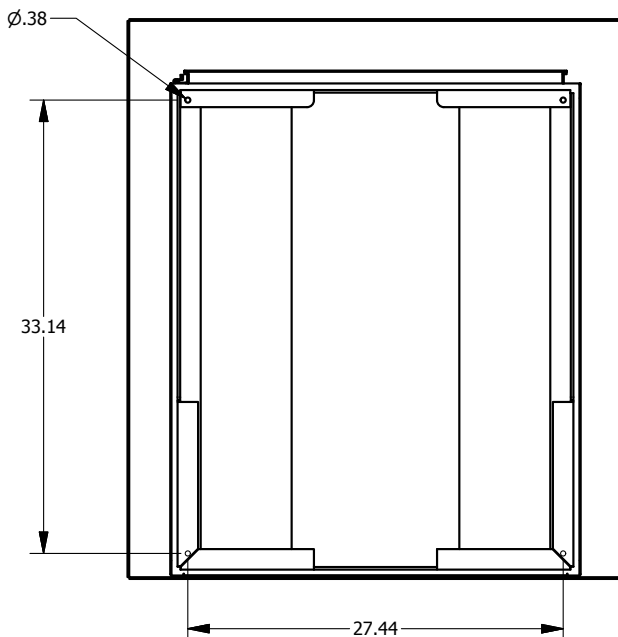
- Proper clearance must be allowed in front of the PowerGATE Power Input Panel to allow for opening of access doors and attachment of externally connected cables. This distance should be no less than six (6) feet from the face of the panel.
- While keylock protection is provided, access by unauthorized personnel and vandals should be taken into consideration when locating this device.

Shipment: Unpacking and Inspection

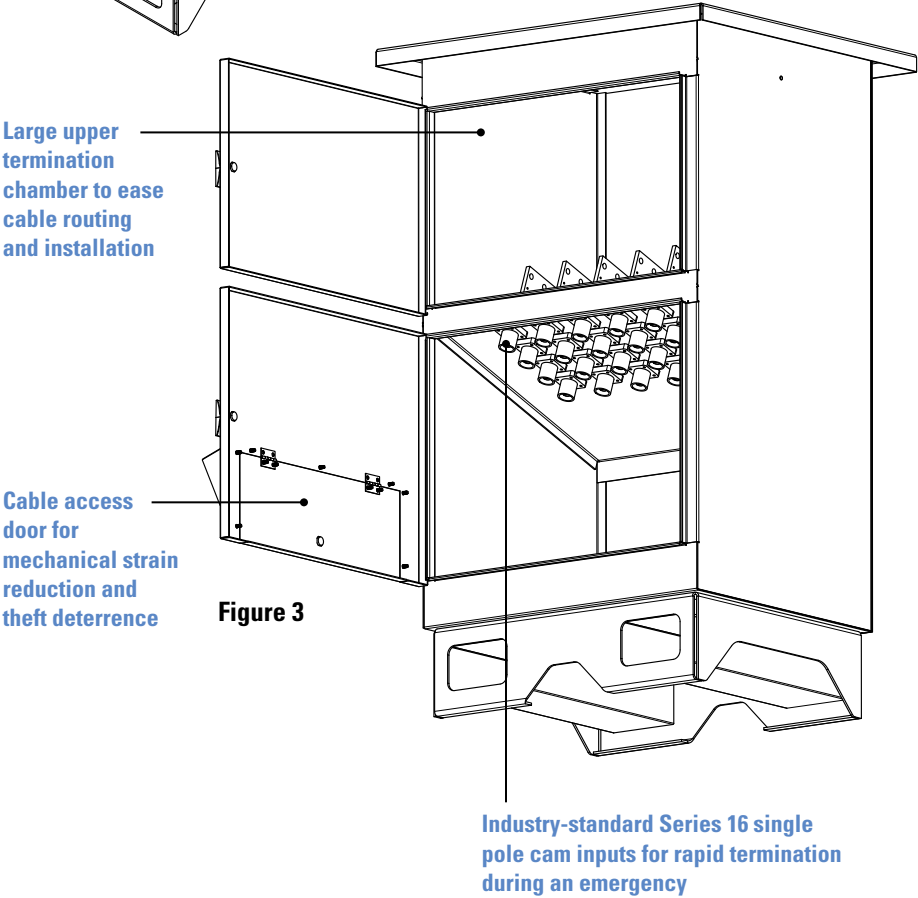
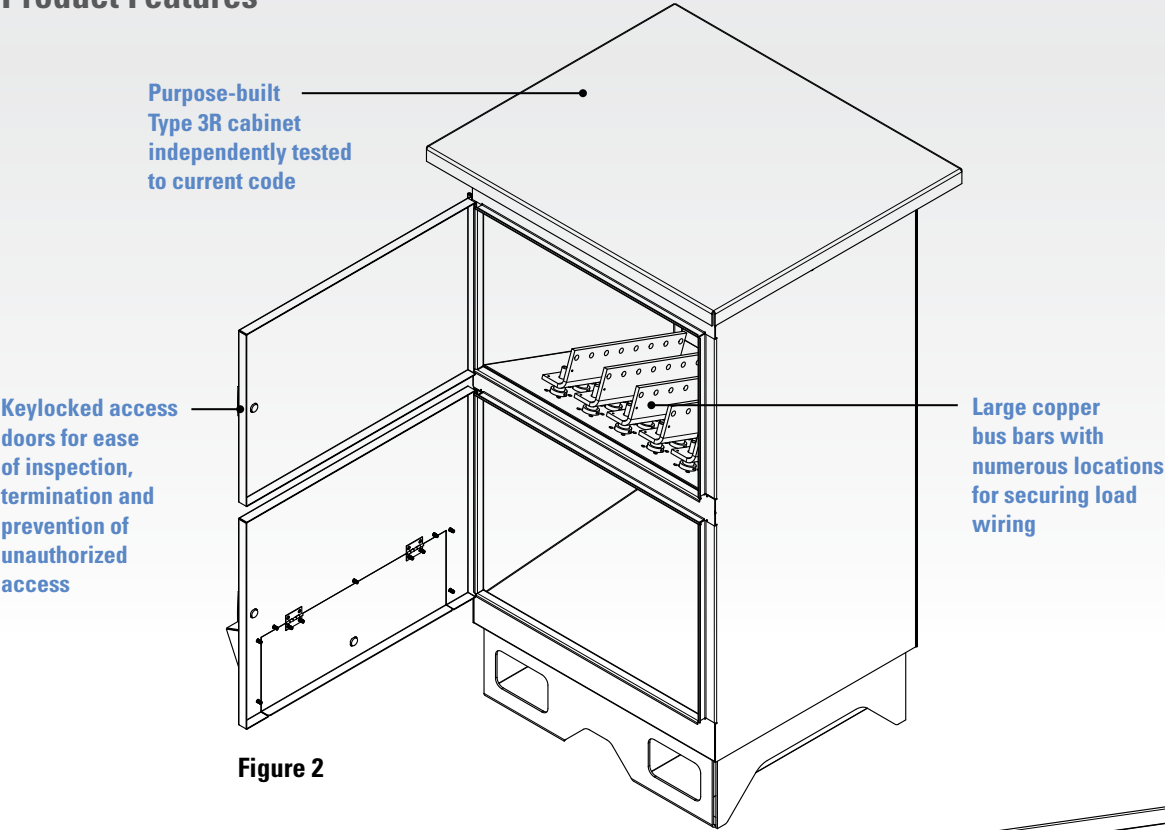
Note: be careful in the use of sharp object when cutting packaging as scratching of outer coating may result in rusting.

Perform a visual inspection to ensure all keylocks and doors are in functioning condition and that the panel integrity is intact.

Figure 1



Product Features



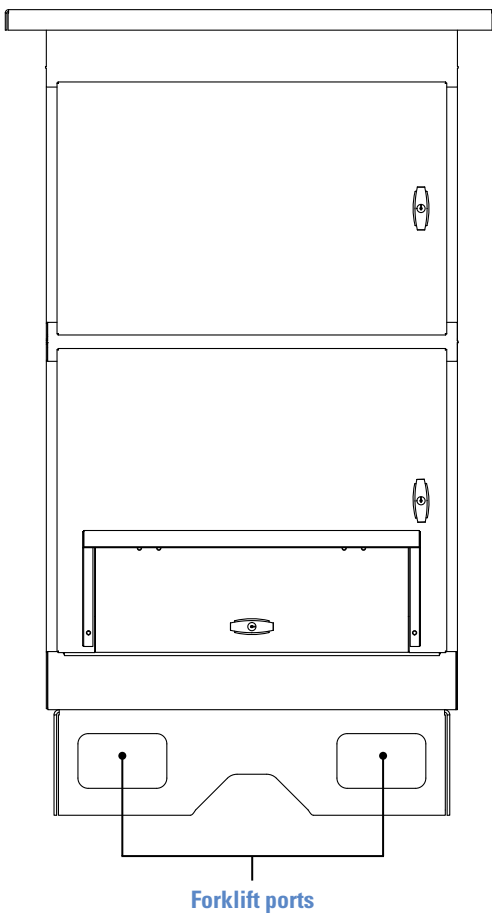
Installation

WARNING

The PowerGATE Power Input Panel is top heavy and therefore the center of gravity is well above the forklift slots (See Figure 4). Care must be taken to secure the device when it is lifted and moved.

- Please note that the 1200 Amp versions weigh approximately 485 pounds and the 1600 Amp versions weigh approximately 505 pounds

Figure 4



The installation of the PowerGATE Power Input Panel should be carried out by qualified personnel in accordance with local electrical codes.

Step 1: Fasten the PowerGATE Power Input Panel to secure base

1. Base must be level and plumb to allow for proper drainage from the PowerGATE Power Input Panel weep holes
2. Fastening onto an external pad using 3/8" fasteners must be completed prior to proceeding with any terminations (See Figure 1 for hole spacing)

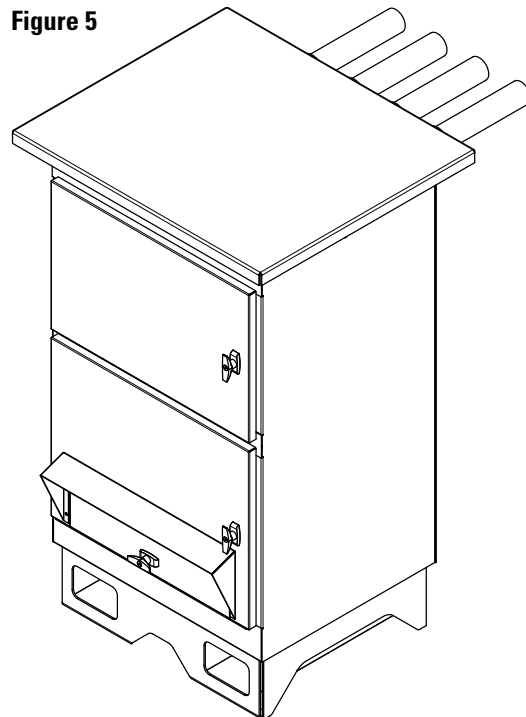
Step 2: Installing the Conduit

NOTE: Conduit to enter through the top or top rear of the device (See Figure 5)

NOTE: To maintain TYPE 3R Rating compliance for the enclosure, proper sealing procedures must be followed. This is to include, but not limited to, the use of proper gaskets.

1. Open upper to door to expose termination chamber
2. Conduit to be sized according to cabinet and cabling rating
3. It is recommended that a knockout punch be used to cut hole for conduit. Place the punch on the inside of the enclosure and draw the punch through to the die on the outside.
4. Vacuum entire upper chamber to ensure no metal shavings are left behind

Figure 5



Installation – Continued

Step 3: Wiring the Bus Bars

WARNING

Ensure circuit breakers are OFF and the transfer switch is locked out from utility power prior to connection.

Failure to install transfer switch will create the potential for the generator to energize utility lines and endanger utility personnel. Conversely, utility lines may energize the PowerGATE Power Input Panel and endanger generator personnel.

The PowerGATE Power Input Panel is for use only for connection of a generator to the source terminals of a transfer switch, such that the inlets are only energized from the generator.

1. Secure ring terminals on ends of cable
 - The recommended input (contractor direct wire) wire gauge for this unit is 350 MCM
 - Terminal crimp rings to have 1/2" opening
2. Secure ring terminals to bus bar
 - Use 1/2" bolts tightened to ninety-eight (98) foot pounds of torque
3. Secure a solid and permanent electrical ground between the building ground point and the PowerGATE Power Input Panel

NOTE: Conduit shall NOT be relied upon to provide grounding protection to tap box

4. Vacuum entire upper chamber to ensure no metal shavings are left behind

WARNING

Three phase power systems consist of three phase or hot conductors that are shifted by 120 degrees. Three phase loads such as motors may only work properly if the phases are connected in the correct order. Some motors may work with connected improperly, but will operate backwards. Utility power and electrical generators may be wired either in a clockwise or counter-clockwise order. It is important that any generator connected to the PowerGATE input panel is connected in the same rotation (clockwise or counter-clockwise) as the utility power.

Step 4: Determine Phase Rotation

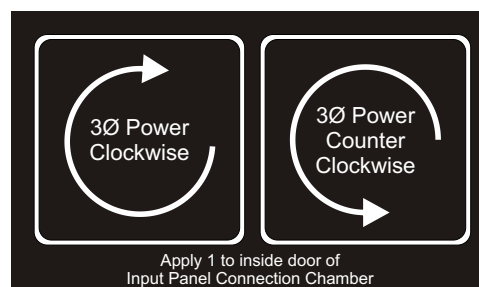
This information will be needed when connecting a generator.

A: Determine phase rotation of the utility power.

- Connect a phase rotation meter to a three phase power source in the building and record whether the building is wired clockwise or counter-clockwise

B: Apply the provided label (Figure 6) to the inside of the PowerGATE Input Panel on the inside of the cam connection chamber door (Figure 7).

Figure 6



Lex Products Part Number – LBL-PGIP-ROTATION

Figure 7



Place rotation label here

Step 5: Conduct a safety test to ensure proper installation

Do not attempt to use the PowerGATE Power Input Panel prior to installation and completing the Pre-Operation and Maintenance Checklist under Appendix A.

Set-up

A: Review Pre-Operation Checklist under Appendices A prior to operation (page 10)

WARNING

DO NOT ATTEMPT CONNECTION WHILE CIRCUITS ARE LIVE

- Do not use cables if they appear frayed
- Do not use cable if connectors or plug do not seat properly
- Do not use cables if any copper cabling is exposed
- To limit risk of shock, disable generator automatic start to prevent unintended starting

B: Determining phase rotation of generator

1. Disconnect generator from all loads if needed
2. Connect a phase rotation meter to the output phases of the generator
3. Record generator phase rotation (clockwise or counter-clockwise)

C: Making Cam Connections

1. Open lower chamber door
2. Complete the Ground (green) connections, beginning with the furthest from the front door to the left

Proper connection (See Figure 8):

- A. Grasp connector jacket and firmly insert cam connector into cam plug
- B. Push on cam connector jacket until connector fully seats in cam plug
- C. Rotate cam connector jacket counterclockwise until it stops

Figure 8



3. Continue with connections, beginning with the rear of the cabinet and working forward
4. Complete ALL Ground connections working from back to front prior to proceeding
5. Complete the Neutral (white) connections, beginning with the furthest from the front door

Proper connection (See Figure 8):

- A. Grasp connector jacket and firmly Insert cam connector into cam plug
- B. Push on cam connector jacket until connector fully seats in cam plug
- C. Rotate cam connector jacket counterclockwise until it stops
6. Continue with connections, beginning with the rear of the cabinet and working forward
7. Complete the Phase (hot) connections

- A. Should the phase rotation of the generator (as determined in Step 5.B.3. above) and utility power (label found on the inside of the door for the Cam connection chamber) match, connect the Hots as follows:

Generator Hot	PowerGATE Power Input Panel Hot
A	A
B	B
C	C

- B. Should the phase rotation of the generator (as determined in Step 5.B.3. above) and utility power (label found on the inside of the door for the Cam connection chamber) NOT match, connect the Hots as follows:

Generator Hot	PowerGATE Power Input Panel Hot
A	B
B	A
C	C

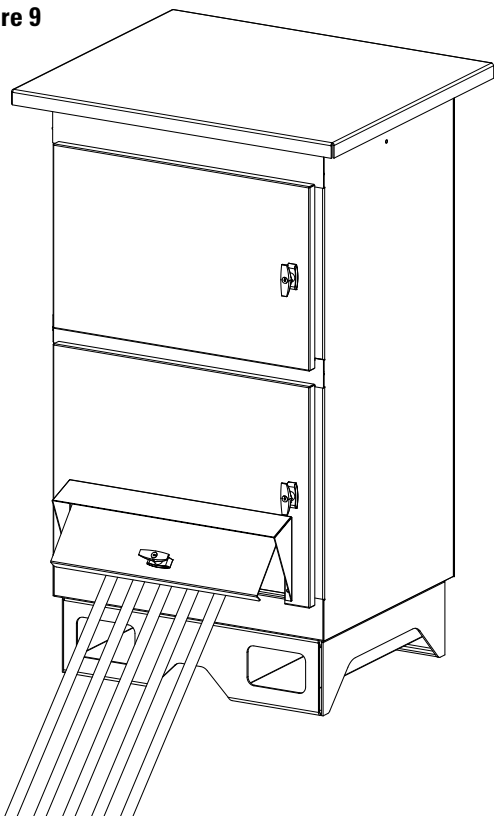
Set-up – Continued

Proper connection (See Figure 8):

- A. Grasp connector jacket and firmly Insert cam connector into cam plug
 - B. Push on cam connector jacket until connector fully seats in cam plug
 - C. Rotate cam connector jacket counterclockwise until it stops
8. Continue with connections, beginning with the rear of the cabinet and working forward
 9. Complete ALL Phase connections working from back to front prior to proceeding
 10. Make sure all connections are right and secure

Step 6: Close and lock lower chamber door, allowing cables to exit through smaller cable door (See Figure 9)

Figure 9



Disconnection

Step 7: Powering Up



WARNING

Power MUST BE supplied from a single generator

1. Start generator per manufacturer instructions
2. Toggle the transfer switch, diverting power from utility to generator feed

Step 8: Disconnecting Circuits



WARNING

DO NOT ATTEMPT DISCONNECTING WHILE CIRCUITS ARE LIVE

1. To limit risk of shock, disable generator automatic start to prevent unintended starting
 - Open lower chamber door
 - Order of disconnect
2. Disconnect the Phase (hot) connections, beginning with the closest to the front door to the right

Proper disconnection (See Figure 10):

- A. Grasp connector jacket firmly and rotate cam connector clockwise until it stops
 - B. Firmly pull on connector until it separates from the plug
 - C. Set aside
3. Continue with ALL Phase (hot) connections, beginning with the front of the cabinet and working from front to back

Figure 10



4. Complete disconnect of ALL Hot connections prior to proceeding
5. Disconnect the Neutral (white) connections, beginning with the closest to the front door

Proper disconnection (See Figure 10):

- A. Grasp connector jacket firmly and rotate cam connector clockwise until it stops
 - B. Firmly pull on connector until it separates from the plug
 - C. Set aside
6. Continue with ALL Neutral (white) connections, beginning with the front of the cabinet and working from front to back
 7. Complete disconnect of ALL Neutral connections prior to proceeding
 8. Disconnect the Ground (green) connections, beginning with the closest to the front door

Proper disconnection (See Figure 10):

- A. Grasp connector jacket firmly and rotate cam connector clockwise until it stops
 - B. Firmly pull on connector until it separates from the plug
 - C. Set aside
9. Continue with ALL Ground (green) connections, beginning with the front of the cabinet and working rearward
 10. Complete disconnect of ALL Neutral connections prior to proceeding

Step 9: Secure the three (3) keylocks to complete procedure

Limited Warranty

When this PowerGATE Power Input Panel is installed and operated according to the manual's instructions Lex Products will repair or replace any of its mechanical or electrical parts if they are found to be defective in material or workmanship within one year of the purchase date.

Maintenance

The PowerGATE Power Input Panel will require periodic maintenance. Lex Products recommends annual inspections to keep the panel in safe operating condition. Lex Products recommends that the Pre-Operation and Maintenance Checklist under Appendix A serve as a basis for annual inspection.

Technical Support

Lex Products Technical Service department is available 24/7 to assist in resolving issues by calling 1.855.LEX.1002 or emailing support@LexProducts.com. For any other information, please call Lex Products at 1.800.643.4460 or e-mail info@LexProducts.com.

Appendix A

Pre-Operation Checklist

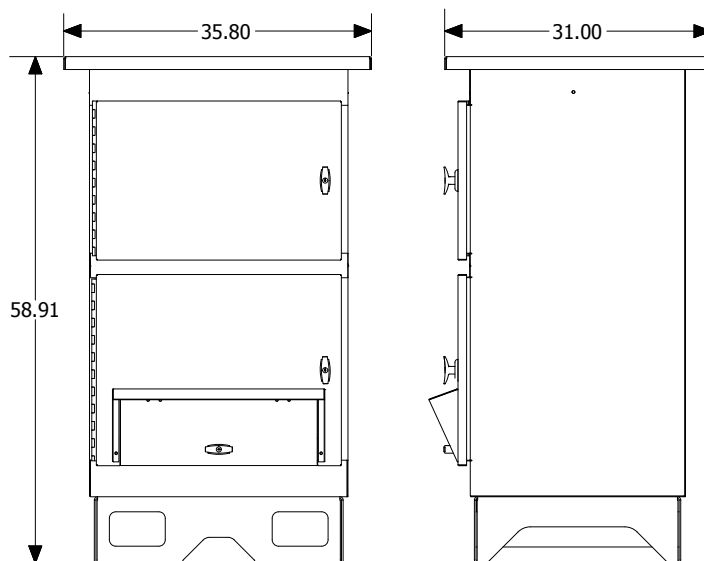
1. Visual inspection of enclosure
 - Ensure the PowerGATE Power Input Panel is firmly secured to its base and/or building
 - Review conduit connection for signs of leakage
 - Ensure paint is intact with no signs of rust or corrosion
2. Open all chamber doors
 - Ensure chambers are dry and free of debris
 - Ensure that gaskets are pliable and no cracking exists
 - Ensure that door hinges are secure and lubricated
 - Ensure that keylocks are intact and operational
 - Ensure that all load terminals are securely fastened and that the bolts are set at ninety-eight (98) foot pounds of torque
 - Ensure paint is intact with no signs of rusting or corrosion
 - Ensure electrical connections are intact with no signs of corrosion or cracking
3. Review all safety labels and ensure that they are present and legible
 - See Appendix D for label nomenclature and location
 - Replace as needed
4. Inspect all portable cables
 - Do not use cables if they appear frayed
 - Do not use cable if connectors or plug do not seat properly
 - Do not use cables if any copper wiring is exposed
5. Lex Products Technical Service department is available 24/7 to assist in resolving issues. If you have any questions or need technical advice or suggestions regarding this product, please contact Lex Products at 203-363-3738 or e-mail support@LexProducts.com.

Appendix B

Parts Dimensions

1. Table with leader letters, part number and part description

Figure 11



Appendix C

Represented Model Numbers and Ratings of Multi-Row Input Panels

Specific model numbers for 1200A Delta 208Y/120V operation:

PGIP1200-CRG15EI-S3
PGIP1200-CRG15EI-S3-BOY
PGIP1200-CRG15EI-S3-BBB

Specific model numbers for 1600A Delta 208Y/120V operation:

PGIP1600-CRG15EI-S3
PGIP1600-CRG15EI-S3-BOY
PGIP1600-CRG15EI-S3-BBB

Specific model numbers for 1200A Wye 240V operation:

PGIP1200-CRG12DI-S3
PGIP1200-CRG12DI-S3-BOY
PGIP1200-CRG12DI-S3-BBB

Specific model numbers for 1600A Wye 240V operation:

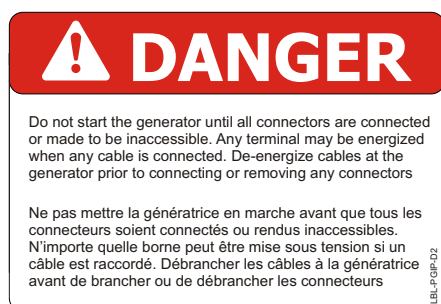
PGIP1600-CRG12DI-S3
PGIP1600-CRG12DI-S3-BOY
PGIP1600-CRG12DI-S3-BBB

Appendix D

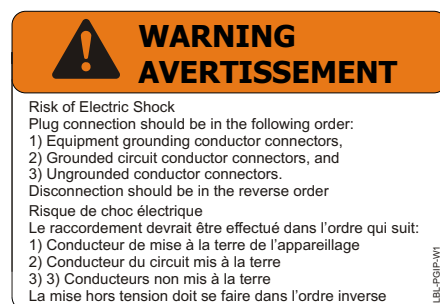
Labels for Replacement



Lex Products Part Number – LBL-PGIP-D1



Lex Products Part Number – LBL-PGIP-D2



Lex Products Part Number – LBL-PGIP-W1



Lex Products Part Number – LBL-A



Lex Products Part Number – LBL-B



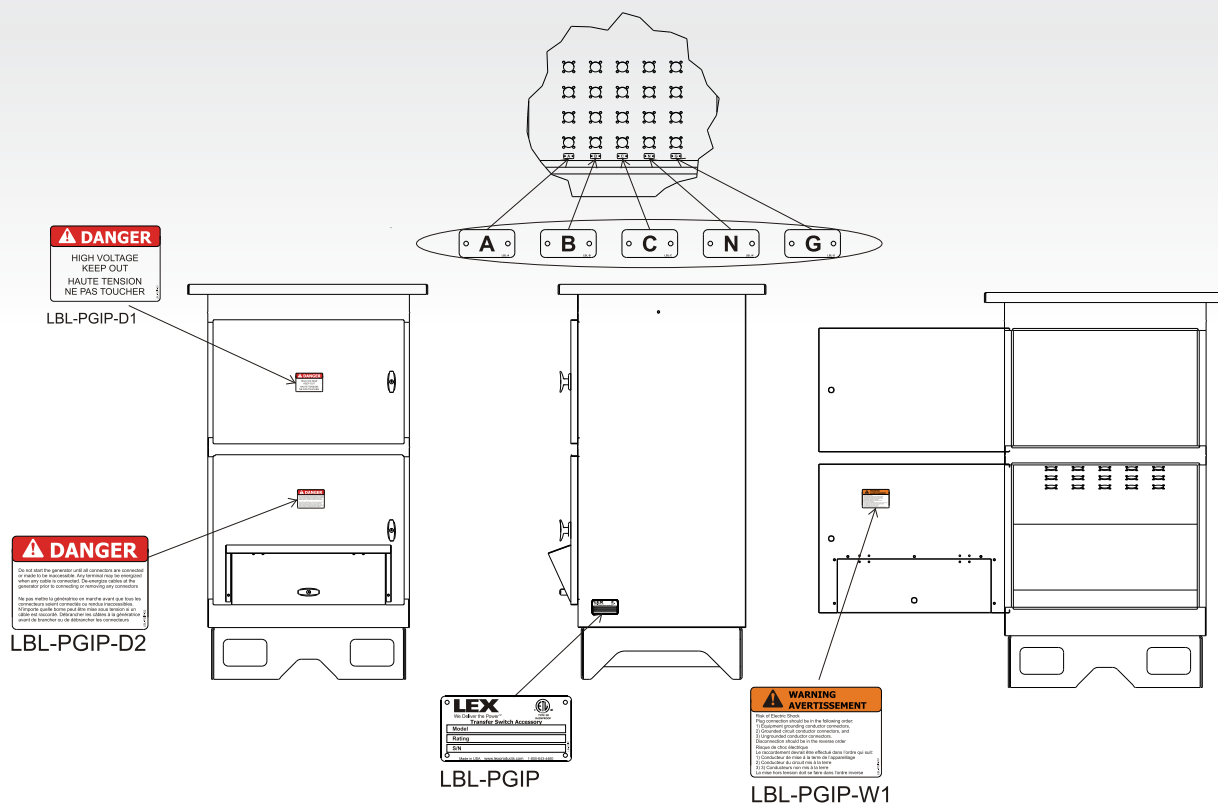
Lex Products Part Number – LBL-C



Lex Products Part Number – LBL-N



Lex Products Part Number – LBL-G



PowerGATE™ Power Input Panel

User Manual for 1200 and 1600 Amp Models



Ordering information

cETLus Listed

	1200 Amp	1600 Amp
Part Number	PGIP1200-CRG15EI-S3	PGIP1600-CRG20EI-S3
Rating	1200 Amp, 3 Phase (H,H,H,N,G), 4 Pole, 5 Wire, 600 VAC Maximum	1600 Amp, 3 Phase (H,H,H,N,G), 4 Pole, 5 Wire, 600 VAC Maximum
Environmental Rating	TYPE 3R Rainproof	TYPE 3R Rainproof
Input	(3) Sets of (5) 16 Series Cam-type color coded panel mount inlets	(4) Sets of (5) 16 Series Cam-type color coded panel mount inlets
Output	Copper Bus Bar with 1/2" Holes	Copper Bus Bar with 1/2" Holes
Enclosure	Powder Coated 12 Gauge Galvanized Steel	Powder Coated 12 Gauge Galvanized Steel
Dimensions	56" H x 30" D x 35" W	56" H x 30" D x 35" W
Approximate Weight	485 lbs	505 lbs

Part Number	PGIP1200-CRG12DI-S3	PGIP1600-CRG16DI-S3
Rating	1200 Amp, 3 Phase (H,H,H,G), 3 Pole, 3 Wire, 600 VAC Maximum	1600 Amp, 3 Phase (H,H,H,G), 3 Pole, 3 Wire, 600 VAC Maximum
Environmental Rating	TYPE 3R Rainproof	TYPE 3R Rainproof
Input	(3) Set of (4) 16 Series Cam-type color coded panel mount inlets	(4) Set of (4) 16 Series Cam-type color coded panel mount inlets
Output	Copper Bus Bar with 1/2" Holes	Copper Bus Bar with 1/2" Holes
Enclosure	Powder Coated 12 Gauge Galvanized Steel	Powder Coated 12 Gauge Galvanized Steel
Dimensions	56" H x 30" D x 35" W	56" H x 30" D x 35" W
Approximate Weight	475 lbs	495 lbs

BRB (Black, Red, Blue), BOY (Brown, Orange, Yellow), BBB (Black, Black, Black) and RGN (Reverse Ground Neutral) Cam options available. Contact a Lex Products sales representative for more information



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